

## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/IE 03/00098

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 C12Q1/68

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 C12Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, BIOSIS, MEDLINE, CHEM ABS Data, EMBASE

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02 36821 A (MCCARTHY THOMAS VALENTINE ;COLLINS RUAIRI (IE); UNIV COLLEGE CORK) 10 May 2002 (2002-05-10)	1-6, 9-13, 15-18 7,8
Y	abstract page 10, line 1 - page 23, line 2; cf. in particular p. 10, line 1 - line 18 and p. 15, line 15 - p. 17, line 11 claims 1-29 ---- -/-	

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

## \* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*&\* document member of the same patent family

Date of the actual completion of the international search

Date of mailing of the international search report

30 September 2003

13/10/2003

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Madlener, M

## INTERNATIONAL SEARCH REPORT

Int'l Application No  
IE 03/00098

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2002/072095 A1 (BERNINGER MARK ET AL) 13 June 2002 (2002-06-13)	1-6, 9-13, 15-18 7,8
Y	abstract page 1, right-hand column, paragraph 6 -page 4, right-hand column, paragraph 1 page 7, right-hand column, paragraph 4 claims 1-46 ----	
X	WO 99 13108 A (UNIV MARYLAND ;US HEALTH (US); HSU IH CHANG (US); SHIH JAMES W (US) 18 March 1999 (1999-03-18)	1-6,9, 11-13, 15-18 7,8,10
Y	abstract page 5, line 1 -page 7, line 5 claims 1-22 ----	
X	WO 97 03210 A (FORFAS TRADING AS BIORESEARCH ;UNIV CORK (IE); MCCARTHY THOMAS VAL) 30 January 1997 (1997-01-30) cited in the application	1-6,9, 11-13, 15-18 7,8,10
Y	abstract page 8, line 8 -page 20, line 31 claims 1-20 figures 1-9 ----	
X	WO 99 54501 A (MCCARTHY THOMAS VALENTINE ;UNIV CORK (IE); IRELAND TRADING AS BIOR) 28 October 1999 (1999-10-28) cited in the application	1-6,9, 11-13, 15-18 7,8,10
Y	abstract page 2, line 6 -page 26, line 19 claims 1-24 figures 1-7 ----	
X	US 6 090 553 A (MATSON ROBERT S) 18 July 2000 (2000-07-18)	1-6,9, 11-13, 15-18 7,8,10
Y	abstract column 3, line 53 -column 6, line 57 claims 1-27 ----	
		-/-

## INTERNATIONAL SEARCH REPORT

International Application No  
IE 03/00098

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	SCHOUTEN KAREN A ET AL: "Endonuclease V protects Escherichia coli against specific mutations caused by nitrous acid." MUTATION RESEARCH, vol. 435, no. 3, 7 December 1999 (1999-12-07), pages 245-254, XP002255391 ISSN: 0027-5107	10
A	abstract ----	1-9, 11-13, 15-18
Y	GUO GUANGMING ET AL: "Endonuclease V (nfi) mutant of Escherichia coli K-12." JOURNAL OF BACTERIOLOGY, vol. 180, no. 1, January 1998 (1998-01), pages 46-51, XP002255392 ISSN: 0021-9193	10
A	abstract ----	1-9, 11-13, 15-18
Y	HUANG JIANMIN ET AL: "An endonuclease/ligase based mutation scanning method especially suited for analysis of neoplastic tissue." ONCOGENE, vol. 21, no. 12, 2002, pages 1909-1921, XP002255393 14 March, 2002 ISSN: 0950-9232	7,8
A	abstract -----	1-6, 9-13, 15-18

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/IE 03/00098

### Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:
  
2.  Claims Nos. 14 because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:  
see FURTHER INFORMATION sheet PCT/ISA/210
  
3.  Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

### Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

1.  As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
  
2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
  
3.  As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
  
  
4.  No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

#### Remark on Protest

The additional search fees were accompanied by the applicant's protest.  
 No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 14

Present claim 14 does not comprise any clearly defined features and is hence considered to unclear to the extent that it is not searchable (Article 6 PCT).

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International Application No

PCT/IE 03/00098

Patent document cited in search report	Publication date	Patent family member(s)		Publication date
WO 0236821	A 10-05-2002	IE AU CA EP WO	20000887 A1 1086202 A 2427474 A1 1330546 A2 0236821 A2	11-12-2002 15-05-2002 10-05-2002 30-07-2003 10-05-2002
US 2002072095	A1 13-06-2002	US US US US US AT CA DE DE DK EP ES GR JP JP JP AT CA DE DE DE DK EP ES GR GR JP JP JP JP AT CY DE DE DK EP ES GR HK JP JP JP	6287823 B1 5945313 A 5683896 A 5035996 A 2003077637 A1 159764 T 2073298 A1 69222897 D1 69222897 T2 522884 T3 0522884 A1 2109983 T3 3025964 T3 2103155 C 6090755 A 8011070 B 127855 T 2017522 A1 69022291 D1 69022291 T2 401037 T1 401037 T3 0401037 A2 2040199 T1 92300019 T1 3018005 T3 1979468 C 3058785 A 7004248 B 131878 T 2073 A 69024286 D1 69024286 T2 415755 T3 0415755 A2 2080807 T3 3019092 T3 1000380 A1 2059842 C 3091484 A 7089932 B	11-09-2001 31-08-1999 04-11-1997 30-07-1991 24-04-2003 15-11-1997 13-01-1993 04-12-1997 01-10-1998 20-07-1998 13-01-1993 01-02-1998 30-04-1998 22-10-1996 05-04-1994 07-02-1996 15-09-1995 01-12-1990 19-10-1995 07-03-1996 19-03-1992 05-02-1996 05-12-1990 16-10-1993 25-08-1992 29-02-1996 17-10-1995 13-03-1991 25-01-1995 15-01-1996 11-09-1998 01-02-1996 30-05-1996 22-01-1996 06-03-1991 16-02-1996 31-05-1996 13-03-1998 10-06-1996 17-04-1991 04-10-1995
WO 9913108	A 18-03-1999	AU CA EP WO US	9381598 A 2303206 A1 1012342 A1 9913108 A1 6455249 B1	29-03-1999 18-03-1999 28-06-2000 18-03-1999 24-09-2002
WO 9703210	A 30-01-1997	AT AU AU CA	220725 T 708821 B2 4399596 A 2226542 A1	15-08-2002 12-08-1999 10-02-1997 30-01-1997

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International Application No  
PCT/IE 03/00098

Patent document cited in search report	Publication date	Patent family member(s)		Publication date
WO 9703210	A	DE	69527444 D1	22-08-2002
		DE	69527444 T2	20-02-2003
		DK	843735 T3	11-11-2002
		EP	0843735 A1	27-05-1998
		ES	2176358 T3	01-12-2002
		WO	9703210 A1	30-01-1997
		JP	2000509241 T	25-07-2000
		NO	980105 A	10-03-1998
		NZ	298494 A	29-09-1999
		PT	843735 T	29-11-2002
		US	5952176 A	14-09-1999
-----				
WO 9954501	A	28-10-1999	WO 9954501 A1	28-10-1999
		AT	214104 T	15-03-2002
		AU	753661 B2	24-10-2002
		AU	7075098 A	08-11-1999
		CA	2325854 A1	28-10-1999
		DE	69804143 D1	11-04-2002
		DE	69804143 T2	01-08-2002
		DK	1071811 T3	17-06-2002
		EP	1071811 A1	31-01-2001
		JP	2002512044 T	23-04-2002
		NO	20005311 A	21-12-2000
		NZ	508358 A	26-07-2002
-----				
US 6090553	A	18-07-2000	NONE	
-----				